Design Decisions

All electronics are still being chosen. The following are just options

Microcontroller

- ESP32 - still have to choose which exact model we are going with. Weight and voltage required are the big factors for which we go for. They tend to be very cheap in general.

Motor

- RS2205 2205 2300KV - motor that is brushless and used for drone racing. It is relatively cheap and can create a thrust of 1024 grams. The 1024 grams does depend on the paddle size and amount of voltage supplied.

Motor Driver

-

Distance Sensor

- VL53L0X - uses a laser to measure the distance. Has a range of up to 2 meters which is enough for this prototype. Just make sure the spot that the distance sensor uses to measure the distance is white for better reflectability.

Battery

- Tattu 650mAh 4S 15.2V 95C Lipo Battery - Has enough voltage for the motor and way more than the other electronics need. Need to step down the voltage for the other electronics.

RGB LED

- RGB LED - use ability to change the color to indicate to the user the different states of the drone while its in flight.

Button (Switch)

- Button - used to turn the drone on/off. Could also look into adding more functions in the future.